unbundled network elements, and exchange traffic.[40] The parties also agreed to commence negotiations on the terms, conditions, and prices for local interconnection beginning on October 1, 1997 with an effective date of June 1, 1998.[41] Hart received SCPSC certification as a CLEC in September 1997.[42] The Department has no other information concerning Hart's plans in South Carolina.

Intermedia Communications, Inc.

Intermedia is authorized to provide intrastate, interexchange, and competitive local exchange services in South Carolina.[43] Intermedia negotiated a region-wide interconnection agreement with BellSouth on June 21, 1996.[44] The SCPSC approved that agreement in July 1996 and certified Intermedia as a CLEC in November 1996.[45]

In South Carolina, Intermedia has approximately 400 resold access lines.[46] Intermedia has

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40 Hart Communications Corporation/BellSouth Telecommunications, Inc. Interconnection Agreement, at 1, attached to BellSouth as Appendix B-Volume 1, Tab 4.

41 Id. at 3.

42 Wright Aff., Attachment WPE-A, at 2.

43 Comments of Intermedia Communications Inc. in Opposition to the Request for In-Region, InterLATA Relief, CC Docket No. CC 97-208, at 3 (Oct. 20, 1997) ("Intermedia Comments"). The veracity of Intermedia's comments were attested to by its Director of Strategic Planning and Industry Policy in an attached affidavit.

44 Id.

45 Wright Aff., Attachment WPE-A, at 2.

46 Intermedia Comments at 3.

four data switches located in Columbia, Greenville, Florence, and Charleston, South Carolina, and plans to place voice switches in Greenville and Spartanburg by the third quarter of 1998.[47] Intermedia requested unbundled network elements for the provision of digital data service from BellSouth over fifteen months ago.[48] According to Intermedia, BellSouth has failed not provided the requested unbundled digital loops and has indicated before the Florida Public Service Commission that it may not provide those loops at all.[49] The Department is unaware of any specific plans by Intermedia to provide additional switched services in South Carolina or whether Intermedia has filed a local service tariff.

KMC Telecom Inc.

KMC is a competitive local exchange carrier, authorized to provide local exchange service in seventeen states, including at least five in BellSouth's region.[50] KMC and BellSouth's region-

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47 Id.

48 Id. at 3-4.

49 Id. at 4.

50 Comments of Hyperion Telecommunications, Inc. and KMC Telecom Inc. in Opposition to BellSouth's Application for InterLATA Authority in South Carolina, CC Docket. No. 97-208, at 1-2 (Oct. 20, 1997) ("KMC Comments"). Notwithstanding these comments, which do not list South Carolina as a state where KMC has been certified, BellSouth's Wright Affidavit states that KMC was approved in January 1997 as a CLEC certified in South Carolina to provide local exchange services. Wright Affidavit, ¶ 8; Wright Aff., Attachment WPE-A, at 2. The Department does not possess any additional information that clarifies the issue of KMC's certification.

wide interconnection agreement was approved by the SCPSC on April 3, 1997.[51] An interconnection implementation schedule for three cities (all outside of South Carolina) was included in that agreement, however, no implementation dates were set.[52] KMC has stated that it provides competitive access services using its own fiber optic network in Huntsville, Alabama and resells BellSouth's local exchange service there.[53] KMC also resells BellSouth's local exchange service in Alabama, Florida, Georgia, and Louisiana.[54] KMC has begun the process of providing local exchange services over its own networks under development in North Carolina.[55]

KMC has not identified when it will begin to provide local exchange services in South Carolina. The Department is unaware if KMC has filed a local exchange tariff in South Carolina.

MCI Telecommunications Corporation

MCI negotiated an interconnection agreement that includes the purchase of unbundled network elements from BellSouth.[56] MCI asserts that it intends to compete in BellSouth's region

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51 Wright Aff., Attachment WPE-A, at 2.

52 BellSouth and KMC Interconnection Agreement, February 24, 1997, at 15-20.

53 Declaration of Larry E. Miller ¶ 4, attached to KMC Comments.

54 KMC Comments, at 2.

55 Id.

56 BellSouth and MCI Interconnection agreement. The SCPSC approved this agreement on September 14, 1997. MCI was certified as a CLEC by the SCPSC in July 1997. Wright Aff., Attachment WPE-A, at 2.

using each method of entry -- resale of incumbent services, purchasing UNEs, using MCI's own facilities, and entering into ventures with other companies to construct or utilize facilities.[57] Currently, it does not have separate local facilities of its own in South Carolina. MCI has stated that it intends to provide local telecommunications services to both business and residential customers through its own switches and other facilities.[58]

MCI has submitted limited test orders, including six residential resale orders and thirteen residential UNE combination orders in South Carolina.[59] It states that "the timing of additional activity in South Carolina will depend on whether BellSouth begins to comply fully with the Act."[60] MCI is testing BellSouth's region-wide systems in Georgia and "[o]nly when BellSouth has complied with the Act fully in Georgia will it make sense for MCI to expand into the other states in BellSouth's region."[61]

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[57] Declaration of Marcel Henry on Behalf of MCI Telecommunications Corporation ¶ 12 ("Henry Declaration"), attached to MCI Comments.

[58] Id.

[59] Id. ¶ 15.

[60] Id.

[61] Id.

Certificate of Service

I hereby certify that I have caused a true and accurate copy of the foregoing Evaluation of the United States Department of Justice to be served on the persons indicated on the attached service list, by first class mail or hand delivery, on November 4, 1997.

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EXHIBIT 1

Affidavit of Marius Schwartz on Behalf of the U. S. Department of Justice

COMPETITIVE IMPLICATIONS OF BELL OPERATING COMPANY ENTRY INTO LONG-DISTANCE TELECOMMUNICATIONS SERVICES

AFFIDAVIT OF MARIUS SCHWARTZ

May 14, 1997

TABLE OF CONTENTS

Professional Background

1. My name is Marius Schwartz. I am a Professor of Economics at Georgetown University. I received my B.Sc. degree with first-class honors from the London School of Economics and my Ph.D. in economics from the University of California at Los Angeles. My research areas are in industrial organization, antitrust and regulation. I have published on these subjects and have taught courses at Georgetown University and to executives and government officials in the U.S. and other countries.

2. From April 1995 to June 1996, I served as the senior staff economist at the President's Council of Economic Advisers responsible for antitrust and regulated industries. Much of my work was on regulatory reform in telecommunications, and I participated in the development of the Administration's policy leading up to the enactment of the 1996 Telecommunications Act. From 1980 to the present, I have served intermittently as a consultant to the Antitrust Division of the Department of Justice on a wide variety of competition matters. I have also consulted for the OECD, World Bank, USAID, and private clients. My curriculum vitae is attached to this affidavit.

Scope of Assignment

3. I have been asked by the Antitrust Division of the U.S. Department of Justice to analyze the economic conditions under which authorizing regional Bell Operating Company (BOC) provision of in-region interLATA telecommunications services ("BOC entry") would be consistent with the public interest in competition, under the entry standard of § 271 of the Telecommunications Act of 1996 ("Act"). I have also been asked for my opinion, in light of my analysis, regarding the Justice Department's general standard for evaluating BOC applications under § 271 that is described in the Department's comments filed with the Federal Communications Commission. As part of my analysis I have considered both the potential costs and benefits of authorizing interLATA entry by the BOCs, consistently with the specific provisions and overall competitive objectives of Act. I have not been asked to consider whether any individual BOC has met the requirements of § 271 in a particular state.

4. In connection with this assignment, I have drawn on the relevant economics literature and consulted with other academics, regulators, practitioners, and industry participants. I have also

reviewed numerous documents, including but not limited to: submissions in connection with the Motion to Vacate the MFJ that was filed by four BOCs in 1995; submissions in the FCC's proceedings to implement the 1996 Act's provisions on local competition, accounting and non-accounting safeguards, and reform of universal service and access charges; the FCC's relevant Orders; regulatory filings with state commissions; documents submitted to the Department of Justice pursuant to the pending mergers between Bell Atlantic and NYNEX, and SBC and Pacific Telesis; and numerous responses submitted to the letter request of Acting Assistant Attorney General Joel Klein issued on November 21, 1996, concerning the competitive impact of interLATA entry by the BOCs ("responses to Joel Klein letter").

5. My assessment is that the Department of Justice's entry standard strikes a good balance between properly addressing the competitive concerns raised by BOC entry, and realizing the benefits from such entry as rapidly as can be justified in light of these concerns. The Department's standard, therefore, is consistent with the public interest in competition reflected in the entry test of section 271 of the Telecommunications Act

Summary of Analysis and Conclusions

6. The 1996 Act aims to increase competition in *all* telecommunications markets; for the first time, this includes local markets that today are largely regulated monopolies. It is therefore necessary to evaluate the effects of BOC entry not only on competition in long-distance services, but also in local services and in "integrated services" (the offering of both local and long-distance services—whether bundled or separately—by the same provider).

7. Under appropriate conditions, BOC entry holds the promise of yielding significant benefits to the BOCs and to consumers. The principal benefits may include: (a) reductions in retailing costs enabled by joint provision of local and long-distance services; (b) offering consumers valuable new options from dealing with providers of integrated services, e.g., the convenience of one-stop shopping for all their telecommunications requirements; and (c) increasing the degree of competition in long-distance services (both in interLATA services through BOC entry; and in intraLATA toll services in multi-LATA states that now lack dialing parity for entrants, since the Act requires intraLATA dialing

parity in such a state when and only when BOC interLATA entry occurs in the state).

8. BOC entry, however, also raises potential concerns. The principal risk of authorizing premature BOC entry is that doing so will result in significantly less BOC cooperation, than could be induced by an appropriate entry standard, in providing good access at cost-based prices to the various functions and services of a BOC's local networks needed by entrants wishing to offer local or integrated services. These requisite "wholesale local services" include interconnection, unbundled network elements, and discounted local service for resale. Securing efficient access to these services of the BOCs' ubiquitous local networks will be critical for some time to the development of competition in local and integrated services. A BOC's monopolistic withholding of such access cooperation would be a potent and destructive form of rivalry: it would raise competitors' costs, degrade their quality, and deny consumers the benefits of new products. And if facilities-based local competition fails to develop, BOC entry could pose a growing threat to long-distance competition, since today's established access arrangements will increasingly require changes over time.

9. Authorizing premature BOC entry would prematurely reduce a BOC's cooperation incentives for two main reasons: (a) the BOC stands to gain if it can leverage its local market power into the newly opened markets for long-distance and integrated services; and (b) the BOC is emboldened to stiffen its resistance to local competition having secured its coveted long-distance authority. After explaining these incentives, I argue that regulatory and other post-entry safeguards are considerably less likely to secure the new BOC arrangements for local competition than would a more procompetitive entry standard.

10. First, consider leverage incentives. Once the BOC offers long-distance retail services and thus integrated retail services, it becomes a competitor to its access customers—carriers that must purchase from it access services used to provide these retail services. A BOC then becomes less willing to provide access services to others than if it did not offer the retail services itself. This reduced willingness arises in large part, though by no means entirely, because a BOC's prices for wholesale local services and for local retail services are likely to remain more tightly regulated than its prices for long-distance retail services. Asymmetric regulation of this sort pushes a firm to evade regulation by leveraging the more tightly regulated market power into the less regulated services that

require access to the regulated bottleneck services. To raise prices of unregulated services, a BOC must undermine competitors; this it might do—if unchecked by regulation—through various forms of "access discrimination" that raise competitors' costs or degrade their quality.

11. Leverage into long-distance services would entail a BOC's degrading of competitors' long-distance access arrangements; a BOC's ability to do so, however, is limited in the short run (see ¶ 14). But leverage into integrated services could entail degrading of competitors' long-distance access or denying to competitors good access to its wholesale *local* services—because competitors need both to offer integrated services. Undermining integrated-service competitors by restricting their access to wholesale local services could enable a BOC to charge higher prices for its unregulated long-distance services for two reasons: (1) competitors are denied cost savings from joint provision of services, which could raise their cost of providing long-distance services and thus weaken the discipline they impose on the BOC's prices; and (2) some consumers would be willing to pay a premium for dealing with a provider of integrated services, reflecting, for example, the value of one-stop-shopping.

12. Second, and independent of such incentives to leverage market power into long-distance or integrated services, a BOC like any dominant incumbent is inclined to resist cooperating with local entrants that threaten its core local market power. This resistance can be softened—though not eliminated—by authorizing a BOC's long-distance entry only if its adequate cooperation with local entrants has first been secured. Before entry is authorized, the lure of added profit from long-distance and integrated services gives the BOC an incentive to expedite its required cooperation; after entry, however, time is on the BOC's side and its inclination to cooperate correspondingly diminishes. As a practical matter, rescinding a BOC's entry authority if it slows down its cooperation may well be difficult as well as disruptive. (Halting its future marketing efforts may be a more practical option, but is also less potent.)

13. For these reasons, once a BOC's entry is authorized, its incentives to cooperate in providing network access to competitors will diminish significantly. Therefore, a key question is: how effectively can regulatory and other safeguards enforce the requisite BOC cooperation post entry in the face of reduced BOC incentives? Economic reasoning suggests—and historical experience

confirms—that the efficacy of regulatory and other "outside enforcement" varies widely with the economic environment. Regulation fares much better in a stable environment where regulators understand what is and is not standard practice, than in a rapidly changing environment where more frequent adjustments are needed and informational asymmetries are greater. Correspondingly, regulatory oversight can do a reasonable job of maintaining well-established arrangements; but it is far less adept at forcing incumbents to rapidly implement new arrangements, as the lack of historical benchmarks on acceptable performance gives incumbents great latitude to engage in plausible deniability. These observations have important implications.

14. Access arrangements for long-distance services are largely well established; hence regulatory and other safeguards can prevent significant degradation. Although the necessary access arrangements will certainly evolve over time, I understand that radical changes in technical arrangements governing the majority of interexchange revenues are not imminent. While customized arrangements pose a potential problem, such arrangements are used mainly by large customers for whom competitive access alternatives have developed more rapidly. On balance, therefore, regulatory and other safeguards can render the threat to technical arrangements for long-distance access tolerable, at least in the short run.

15. The picture is quite different for access arrangements to wholesale local services. These requisite arrangements are largely new; their implementation will require extensive cooperation by incumbents in developing a host of technical, operational and business protocols, and in establishing appropriate prices.

16. Mandating incumbents' cooperation, as the Act does, surely helps; but the process will evolve much more quickly and efficiently if incumbents have better incentives to cooperate. Thus, the Act sets up the § 271 process which, as is widely acknowledged, only allows for BOC entry when such local-competition access arrangements are meaningfully made available and the market is truly open to competition. This sequencing serves important purposes, as described below. Regulators and other outside enforcers have significantly inferior information than a BOC about how to implement these new systems and how long the task should take. These informational asymmetries hinder reliance on post-entry measures (such as halting BOC marketing of long-distance services, or

imposing financial penalties) to force BOC implementation of these new arrangements, since enforcers' uncertainty about how long implementation should take makes it difficult (and inefficient) to specify rigid deadlines.

17. As the § 271 sequencing recognizes, however, these difficulties can be significantly mitigated by requiring as pre-conditions for BOC entry that all major new systems necessary to open the local market have been made available to entrants, and that their performance has been sufficiently demonstrated; absent such a demonstration, one cannot be confident that the systems indeed do what they promise. Such an entry standard does a better job of aligning incentives: the more informed BOC then has stronger incentives to implement things rapidly in order to expedite opening the local market and thereby its own long-distance entry. And establishing performance benchmarks to gauge the functioning of these new arrangements before authorizing BOC entry renders post-entry safeguards—regulatory, antitrust and contractual—more effective at countering subsequent BOC incentives to degrade these arrangements. Thus, authorizing BOC entry only after a BOC institutes the new access arrangements that are necessary to open the local market to competition is likely to greatly accelerate the emergence of local competition.

18. Although delaying BOC entry until the local market is open may impose some costs, the more rapid opening of the local market that will result is likely to yield significantly larger benefits to consumers. The local market is more than twice as large as long distance (net of access charges), and is largely a regulated monopoly; thus, adding even a modest dose of competition could yield major gains in lower costs and prices, improved service, and product innovation. BOC cooperation in providing wholesale local services also could permit others to compete relatively quickly in integrated services (such as by reselling local services along with long-distance and other services); the ability to offer integrated services is important to enabling long-distance carriers and others to compete effectively with a BOC once it is authorized to offer long-distance service. And in the long run, facilities-based local competition can aid regulation—and eventually, one would hope, supplant it—in safeguarding access arrangements for long-distance services in a less intrusive manner.

19. The foregoing analysis persuades me that BOC entry is appropriate when, and only when, the market in the state has been irreversibly opened to local competition. I believe this entry standard will

provide incentives to the BOCs to extend the cooperation necessary to open local markets more rapidly and efficiently; will help establish the benchmarks enforcers need to maintain the new access arrangements post entry; and will permit BOC entry as rapidly as is consistent with these constraints. Opening the market does not require evidence of local competition of all forms and in all regions of a state sufficient to substantially discipline BOC market power. The Act aims to let market forces determine what forms of entry work best and where; and regulatory and other safeguards will still play a role in disciplining BOC abuse of market power. But, at a minimum, opening the local market requires full, meaningful implementation of the § 271 competitive checklist, not mere paper compliance.

20. By far the best test of whether the local market has been opened to competition is whether meaningful local competition emerges. Local competition establishes presumptions; the more widespread and varied it is, the greater our confidence that the market has been opened. In particular, use on a commercial scale of the new access arrangements needed to support all three modes of local entry envisioned in the Act—facilities-based, unbundled elements, and resale—demonstrates that competitors are obtaining what they need from the BOC. Local competition, even on a modest scale, can also signal entrants' willingness to commit investments and demonstrate their confidence in the openness of the market. Finally, the presence of local competitors can directly assist regulators in preventing future backsliding by the dominant incumbents.

21. If sufficiently diverse competition fails to develop, it is important to understand why. As implied earlier, one possibility is simply lack of interest by entrants in pursuing certain entry modes in certain regions. But before reaching such a conclusion, it is important to ascertain that competition is not being stifled by artificial barriers. Thus, if sufficient competition fails to develop, there should be a rebuttable presumption that this is not due to lack of entrants' interest, but to a failure to irreversibly open the local market. Rebutting this presumption requires ascertaining that the main elements of an open market indeed are in place. The most important element, the logic for which was explained earlier, is the following. *New technical and operational arrangements must be available and shown to be working*: to support all three entry modes envisioned in the Act; on a sufficient scale, and capable of being rapidly expanded and extended to regions where they are not initially

implemented; and for sufficient duration and variety to provide reliable benchmarks to assess and enforce future cooperation.

22. *Procompetitive pricing* of these key inputs also is necessary to inspire confidence that, despite the absence of sufficient actual competition, the market is indeed open. Prohibitively high prices would render the new access arrangements meaningless; to permit efficient local entry, entrants must have adequate assurance that BOC prices for these inputs will remain reasonable and cost-based after interLATA relief is granted. (The FCC has determined that the appropriate costs are: forward-looking incremental cost for unbundled network elements and for transport and termination of local calls; and wholesale discounts off the retail price that are close to the incumbent's avoided retailing costs, in the case of local service sold to other carriers for resale.) Awareness that the § 271 entry process will weigh seriously whether key inputs are priced in a manner that supports efficient competitive entry will usefully complement state efforts in opening local markets.

23. Finally, one must ascertain that competition is not being hindered by any lingering *major state regulatory or other artificial barriers*. (Although such barriers may be subject to preemption under § 253 of the Act, the timeliness and effectiveness of any such FCC preemption decisions is uncertain.) If such barriers are likely for some time to seriously hinder competitors' ability to avail themselves of the new access arrangements put in place with BOC cooperation, these arrangements could become obsolete and the value of such BOC cooperation will decay; and securing this cooperation again once the barriers have been removed but after BOC entry has been authorized will be considerably harder.

24. In short, if sufficient local competition is observed, this demonstrates that the market has been irreversibly opened; if not, one should exercise more caution in approving the BOC's entry, and insist on offsetting evidence that the market indeed has been irreversibly opened. I have reviewed the Department of Justice's entry standard in light of this analysis. I conclude that it strikes a good balance between properly addressing the competitive concerns raised by BOC entry, and realizing the benefits from such entry as rapidly as can be justified in light of these concerns. It therefore serves the public interest in fostering competition.

I. The 1996 Telecommunications Act and BOC Entry into Long-Distance Services

25. The 1996 Act represents a major shift in U.S. telecommunications policy by establishing as a federal goal the promotion of competition in all telecommunications services. The most significant change is the requirement that local telephone markets, heretofore regulated franchise monopolies, be opened to competition. In addition and relatedly, the Act establishes a procedure for authorizing the BOCs to offer long-distance (interLATA) telecommunications services originating in their service regions after a BOC has sufficiently opened its local markets to competition and BOC entry is judged to be in the public interest.

26. Section A below reviews the main relevant telecommunications markets and Section B discusses the Act's goals of increasing competition and improving performance in these markets. Section C stresses why BOC cooperation will be critical to achieving the Act's goals, and section D discusses the benefits and costs of authorizing BOC entry before there is effective local competition. Based on this analysis, section E discusses the main principles that a procompetitive entry standard should incorporate.

A. The Major Telecommunications Markets Relevant to BOC Entry

27. The 1982 consent decree that broke up the vertically integrated Bell system (Modification of Final Judgment, "MFJ"[1]) created seven new regional BOCs, and divided those parts of the country served by the Bell system into Local Access and Transport Areas (LATAs); today, the BOCs serve 164 LATAs. Under the MFJ, a BOC could only offer telecommunications services within LATAs (intraLATA). InterLATA services have been provided by long-distance companies, also known as interexchange carriers (IXCs). Recently, however, some local exchange carriers (LECs) not subject to the Act's § 271 interLATA restriction on the BOCs, have been making serious inroads into long-distance services.

28. Superseding the MFJ, the 1996 Act authorizes any BOC immediately to offer long-distance (interLATA) services that originate in states outside its service regions. But to offer interLATA

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[1] *U.S. v. AT&T*, 552 F. Supp. 131 (D.D.C., 1982). Judge Greene entered the MFJ on August 24, 1984, and the divestiture was consummated January 1, 1984.

services originating in its region, a BOC must receive FCC approval under § 271 of the Act. A BOC applies for approval state-wide.[2] Approval is granted only after the FCC determines all of the following: (a) which if any of the two tracks stipulated in the Act the BOC is eligible to use at the time to satisfy the *competitive checklist* requiring it to open its local markets in the state to competition: Track A (interconnection agreement with a facilities-based competitor serving business and residential customers), or Track B (statement of generally offered terms to competitors where no request has been made by a provider for access and interconnection); (b) after consulting with the state commission, determines that the BOC, through Track A or B, has satisfied the competitive checklist; and (c) determines that such approval is in the *public interest*. In making its determination on a § 271 application, the FCC must consult with the Department of Justice and give substantial weight to its competitive assessment. (In addition, § 272 requires the BOC to offer interLATA services, both in and out of region, through a separate affiliate subject to certain safeguards.)

29. Since the Act links a BOC's interLATA entry authority to the opening of its local markets, in advocating a particular entry standard one must consider its effects on competition in both interLATA and local markets.

1. The BOCs dominate key local networks and are regulated

30. Table 1 shows telecommunications revenues from local (intraLATA) markets now dominated by the BOCs in their regions, and from long-distance (interLATA) markets which the BOCs seek to enter. The data are for 1995, the most recent year for which comprehensive data are available.[3]

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[2] Once a BOC receives interLATA approval in any state, § 273 of the Act authorizes it also to enter manufacturing of telecommunications equipment, from which the BOCs are still barred. I have not been asked, in preparing this affidavit, to address equipment markets.

[3] The data come from the FCC's *Telecommunications Industry Revenue: TRS Fund Worksheet*, December 1996 (*TRS*). There are some relatively minor discrepancies between the *TRS* data and the FCC's *Statistics of Communications Common Carriers*, 1995/96 (*SCCC*). I use *TRS* data because it covers more local carriers. In most cases only LECs with annual revenues over $100 million are required to report to *SCCC* (the 53 such LECs reporting to *SCCC* for 1995 accounted for somewhat over 90% of all LEC revenues). In contrast, almost all telecommunications carriers (1,310) reported to *TRS* for 1995. Thus, *TRS* data cover more LECs (which helps explain some of the discrepancy between the *TRS* and *SCCC* data on LECs), and includes information on other local providers, CAPs (Competitive Access Providers) and CLECs (Competitive Local Exchange Carriers—new local entrants).

Despite some changes since the passage of the Act, notably an increase in the activity of local entrants (discussed shortly), the basic market relationships shown by the 1995 data have not changed markedly. Two points stand out. First, local revenues are twice as large as long-distance revenues (net of access payments collected by LECs). Second, incumbent LECs account for the vast majority of local revenues: $102.8 bn compared with a combined $0.6 bn for CAPs and CLECs; although CAP plus CLEC revenue has risen to about $2 billion in 1996, it is still dwarfed by LEC revenues.

31. In their service regions the BOCs have virtual monopolies over *switched* services, both local exchange and exchange access to long-distance carriers. They also dominate special (or dedicated) access used by long-distance carriers. And in most states they also dominate intraLATA toll services, due to the BOCs' continuing ability in those states to deny to IXCs dialing parity (the ability of a customer to make intraLATA toll calls through an IXC without dialing more digits than through the BOC) before the BOCs begin providing interLATA services in these states.[4] In 1995, the ratio of LEC revenues nationwide to long-distance revenue net of access was about 2-to-1 (Table 1); the BOCs accounted for about 73% of all LEC revenues nationwide (Table 1) and about 77% of all interLATA minutes originated in BOC service areas (*SCCC*, Table 2.10). The 2-to-1 ratio therefore is also a reasonable approximation of the relative sizes of (a) those markets which a BOC now dominates (local markets in its service areas) versus (b) those markets now closed to a BOC and in which the BOC would have the greatest impact (interLATA calls originating in its service areas).[5]

32. In recent years, certain local competition has emerged. In central business districts, CAPs have constructed networks that enable large customers to bypass LECs and link directly to IXCs (mainly to send but not receive calls), and provide some links between local private networks. One

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[4] Competition has been growing in intraLATA toll service, especially in states that introduced dialing parity between the incumbent LEC and IXCs. IXCs' were estimated to account for about $3.3 billion of intraLATA toll revenues in 1995, compared with $10.1 billion for all LECs (Table 1). I discuss intraLATA dialing parity further in section II.B.

[5] The Act bars a BOC (until it secures § 271 authority) from providing interLATA services that originate anywhere in its states, including parts of a state where local service is provided by other LECs not the BOC. However, the BOC's competitive significance in interLATA services is likely to be greatest for calls originating in its service areas, where it dominates local networks. (Reflecting the difference that control of local networks can make, the Act permits the BOCs to offer interLATA services originating in out-of-region states.)

can expect CAPs and CLECs to expand into switched services, since the 1996 Act preempts many legal barriers that had precluded competition for such switched services in many states.[6] But CAPs and other local entrants face more than just legal hurdles.

33. Expanding local operations is expensive, and requires significant cooperation from incumbents. As mentioned, the BOCs in their regions retain the only ubiquitous switched local networks. These consist of several major elements. (a) The *local loop* is the sets of wires linking subscriber premises to the telephone company's wire centers (or "central offices"). This local distribution plant is by far the most expensive network element; duplicating it on a large scale would be prohibitively costly, and probably inefficient. (b) *Switching* facilities allow subscribers to communicate indirectly (as opposed to using point-to-point links) with others. Virtually all residential subscribers and small businesses depend on switched local access to originate and to terminate both their local and long distance calls, as non-switched access is only economical for large users. (c) *Local transport* facilities are high capacity trunk lines that connect central offices or other switches. (d) The BOCs also control key *databases*, and key network *signaling* functions—the flow of information associated with setting up, disconnecting, and otherwise controlling a telephone call (information such as the identity of the parties, the duration of the call and the signal being transmitted, e.g., voice or data).

34. In view of their substantial market power, the BOCs and other LECs remain regulated in their prices for most local services and exchange access. Moreover, as explained shortly, the new Act requires incumbent LECs to offer numerous new "wholesale" local services at regulated prices to other telecommunications providers.

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[6] Indeed, Table 1 understates the revenues of CAPs and CLECs today. New Paradigm Resources Group (NPRG), based on data it developed together with Connecticut Research, reports the following trends. In 1996 CLECs, in which NPRG includes also CAPs, nearly doubled their revenues to $2.2 billion and increased their market shares for all service categories. Their estimated shares of national totals are: 0.4% of local services; 1.8% of intraLATA toll; 0.3% of switched access services; and 10.6% of dedicated access services. NPRG expects these shares to increase considerably in the mid-term future as CLECs are aggressively deploying switch facilities. Still, NPRG notes that these shares remain negligible when compared to incumbent LECs—consistent with the pattern in Table 1—and concludes that, although strong competition for dedicated access services may exist today for selected locations, for the overall local telecommunications market, robust competition does not exist today. NPRG, *Annual Report on Local Telecommunications*, 1996-97.

2. Long-distance markets are relatively competitive and largely unregulated

35. The extent of competitiveness of long-distance markets is hotly debated (see section II.C); but it is surely greater than in local services. There are four national IXCs, which in 1995 had the following revenue shares: AT&T 53%, MCI 18%, Sprint 10%, LDDS/WorldCom 5%; there are also numerous other carriers, with a significant total market share of 14% (*SCCC*, 1995/96, Table 1.4). And there is considerable switching of customers between carriers. In short, while there is not perfect competition, there is considerable competition.[7]

3. Inefficiencies in the present industry structure

36. While the MFJ succeeded in increasing competition in long-distance services, the current structure of the U.S. telecommunications industry is surely far from perfect.

37. *Losses from separation.* The MFJ's separation of activities based on LATAs imposes certain costs. As explained in section II, it precludes the BOCs from attempting to exploit various economies of scope, especially on the retailing side, asso :iated with joint provision of local and long-distance services; from offering consumers the benefits of one-stop shopping and new services that require both local and interLATA facilities; and from bringing more competition to long-distance services (see the ensuing section I.D.1). LATA boundaries necessarily impose artificial separation between points near the boundaries, and do not always conform to economic markets or efficient network configurations. LATAs vary widely in size and population; intraLATA calls can travel hundreds of miles, thereby better resembling long-distance calls than local calls as regards the network facilities utilized.[8] For all these reasons, confining the BOCs (or any other firms) to particular geographic

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[7] In finding AT&T non-dominant, the FCC assessed that "most major segments of the interexchange market are subject to substantial competition today, and the vast majority of interexchange services and transactions are subject to substantial competition." *Motion of AT&T Corp. to be Reclassified as a Non-dominant Carrier*, 11 FCC Rcd 3271, 3288, ¶ 26 (1995). The FCC reiterated these views a year later: "Thus, we believe that market forces will generally ensure that the rates, practices, and classifications [of IXCs] are just, reasonable, and not unjustly or unreasonably discriminatory. . . . We also reject the unsupported suggestion that the current levels of competition are inadequate to constrain AT&T's prices." *Policy and Rules Concerning the Interstate, Interexchange Market*, CC Docket No. 96-61, Second Report and Order, FCC 96-424, ¶¶ 21, 22 (released October 31, 1996).

[8] To some extent this reflects the choice of relatively large LATA boundaries at divestiture (a typical LATA is much larger than a local exchange network). However, even if at divestiture LATAs had been drawn to maximize the degree of separation between the perceived local monopoly bottlenecks and the potentially

regions or types of services is not a first-best solution.

38. *Absence of local competition*. But the most glaring problem today is one that the MFJ was not designed to alter: the absence of local competition. Indeed, confining the BOCs may have been the best guardian of nascent long-distance competition in an era where persistence of the BOCs' regulated local monopolies was taken as given. Replacing such monopolies with local competition, however, can ultimately provide a better safeguard for long-distance competition,[9] while also allowing removal of current restrictions on the BOCs.

39. In addition to safeguarding competition in long distance, introducing local competition at this point is likely to yield even greater benefits by improving market performance in the provision of local services, including local exchange and exchange access, and of integrated services. The local market is more than twice as large as long distance (Table 1), and is largely monopolized by incumbent LECs. While regulation holds down some LEC prices, it introduces its own costs.[10] These include: a distorted price structure; rigidities in adjusting prices to changing conditions; and weakening firms' incentives to contain costs (if regulation is largely cost-based), to maintain quality (if regulation is of the price-cap variety), and to be innovative and responsive to customer demands. Where feasible, competition is far superior to regulated monopoly as a device for promoting cost reduction, innovation, and superior service.

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competitive segments, airtight separation would still be impossible. The boundary between "monopoly" and "potentially competitive" segments is not stationary, but changes with technology and the advent of new services. Any rigid regulatory separation is therefore bound to become imperfect.

[9] The BOCs' own statements implicitly acknowledge that regulation is an inferior safeguard to competition. "This competition (from CAPs) was driving the Bell companies to lower the price *and raise the quality* (emphasis added) of their local exchange services even before the 1996 Act." Joint Response of Bell Atlantic and US West to Joel Klein letter, December 13, 1996, 32-33.

[10] Robert W. Crandall and Leonard W. Waverman, *Talk Is Cheap: The Promise of Regulatory Reform in North American Telecommunications*, The Brookings Institution, 1995, chapters 3, 8 ("Crandall and Waverman, 1995"). Gerald W. Brock, *Telecommunications Policy for the Information Age: From Monopoly to Competition*, Harvard University Press, 1994, chapters 12, 14, 15.

B. The New Competitive Vision in the 1996 Act

40. The 1996 Act creates a clean slate and offers an unusual opportunity to remedy many of the above deficiencies in the present industry structure.

1. The Act aims to promote unfettered competition in all markets

41. The Act's unifying goal is increased competition in all markets and the eventual elimination of artificial service boundaries. This means more competition in providing: local services; long-distance services; and "integrated services"—the options of one-stop shopping for, or obtaining bundled packages of, these and other telecommunications services.[11]

42. If successful in promoting local competition, the Act will eventually allow the replacement of detailed, hands-on regulation of local retail prices and services with a combination of local competition and more confined and less intrusive regulation of only key bottleneck network services.[12] (Some regulation of interconnection, especially of termination charges, will be necessary for some time, as explained shortly.) And it will permit any firm to offer any service anywhere, including doing away with restrictions on what services the BOCs may offer and how. As the FCC put it:

> Indeed, the relationship between fostering competition in local telecommunications markets and promoting greater competition in the long distance market is fundamental to the 1996 Act. . . the opening of one of the last monopoly bottleneck strongholds in telecommunications -- the local exchange and exchange access markets -- to competition is intended to pave the way for enhanced competition in *all* telecommunications markets, by allowing all providers to enter all markets.[13]

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11 One-stop shopping and bundled packages are closely related notions, but not identical. One-stop shopping lets a customer obtain the same services as before, but from a single source. Bundled packages entail combining and pricing the individual services in new ways. Some customers may demand only one-stop shopping; others may value bundles, while continuing to shop for individual elements separately (e.g., in response to special promotions); still others may choose to purchase only integrated bundles and only from the same source. For brevity I will refer to these features collectively as "integrated services."

12 See, e.g., Joseph Farrell, "Creating Local Competition," Speech delivered at FCC, May 15, 1996 ("Farrell 1996").

13 *In the Matter of Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, CC Docket No. 96-98, First Report and Order, (Aug. 8, 1996) ("Local Competition Order"), ¶ 4.